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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/856,584      | 05/23/2001  | Jose Manuel Gallego  | 1-15397             | 3577             |

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04/15/2004

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EXAMINER

MEEKS, TIMOTHY HOWARD

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1762

DATE MAILED: 04/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/856,584 | <b>Applicant(s)</b><br>GALLEGO, JOSE MANUEL |  |
|                              | <b>Examiner</b><br>Timothy H. Meeks  | <b>Art Unit</b><br>1762                     |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 8-22 and 24-36 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/12/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/12/04 has been entered.

### ***Application Status***

Claims 1 and 3-36 remain pending.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 10-16, 20, 21, and 25-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Guiselin et al. (5,965,246).

Guiselin discloses deposition of a stack of layers on a glass substrate to form a heat-treatable low-emissivity (less than 0.044, claim 1) coated glass that comprises depositing an

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aluminum oxyfluoride interlayer having a thickness of 45 and 60 nm, a reflecting silver layer deposited directly on the aluminum oxyfluoride layer having a thickness of 10 and 12 nm and a tin oxide dielectric layer on the silver layer having a thickness of 42 nm (col. 9, lines 40-60).

Guiselin further discloses at col. 6, lines 10-25:

"It may be advantageous to combine the two types of techniques, and thus to deposit the interlayer, directly on the glass of a float-glass ribbon by pyrolysis when it is an oxide or oxyfluoride. Then, in a subsequent step, particularly when the functional layer is metal, more particularly silver, the other layers of the stack may be deposited on the glass by sputtering once the glass has been cut up. When an aluminum oxyfluoride interlayer is chosen, it may be deposited father by sputtering or by pyrolysis, preferably by pyrolysis in the vapor phase using an organometallic precursor, preferably one having alcoholate or .beta.-diketone functionality of aluminum acetylacetonate or 2-methyl-4,6-hiptadione, on which compounds it is possible to substitute at least one of their hydrogen atoms by fluorine. It may thus be an aluminum trifluoroacetate or a hexafluoroacetylacetonate."

With respect to claim 16, Guiselin discloses at col. 4, lines 60-68 deposition of multiple silver and dielectric layers.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 8, 9, 22 and 34-36 are rejected under 35 U.S.C. 103(a) as being Guiselin et al.

The relevant disclosure of Guiselin is discussed above. Guiselin explicitly exemplifies a stack of layers wherein aluminum oxyfluoride is used as the underlayer as opposed to silicon oxide. However, because Guiselin further discloses at col. 3, line 64 to col. 4, line 10 that either

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a low density oxygen deficient silicon oxide layer or aluminum oxyfluoride layer is suitable as the interlayer and at col. 6, lines 10-15 that both the oxide and oxyfluoride layers can be deposited by pyrolysis, it would have been obvious to have used silicon oxide as the underlayer deposited by pyrolysis with a reasonable expectation that such layer would be suitable as the interlayer in the stack of layers exemplified at col. 9. With respect to claim 34, the oxygen deficient silicon oxide interlayer is an "oxygen scavenging" layer. With respect to claims 35 and 36, please note that the disclosure of a laminated glazing at col. 5, line 54 to col. 6, line 5 inherently meets the limitation of an interlayer between the glazing panes as an adhesive layer is necessary to laminate the panes.

With respect to claims 8 and 9, Guiselin is silent as to the temperature for deposition of the tin oxide layer. If applicant can establish a showing of criticality in the claimed temperature, the rejection will be withdrawn. See *Ex parte Khusid*, 174 USPQ 59 ("Where the principal difference between the claimed process and that taught by the reference is a temperature difference, it is incumbent upon applicant to establish criticality of that difference").

Claims 17-19 and 31-33 are rejected under 35 U.S.C. 103(a) as being Guiselin et al in view of Macquart et al.

Guiselin does not disclose heat treating the glass as claimed. However, because Macquart discloses at col. 1, lines 45-60 and col. 8, lines 40-65 that heat treating glass having coating layers similar to those of Guiselin at temperatures over 620 °C provides glass which is curved or functions as safety glass, it would have been obvious to have so treated the glass of Guiselin to provide these products.

***Claim Rejections - 35 USC § 102/103***

Claim 24 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Guiselin.

This rejection is applied given the disclosure in Guiselin of a stack of layers as set forth above and further including the first dielectric layer having a refractive index of 1.9 to 2.3 directly beneath the reflecting layer being the claimed "underlayer" (col. 5, lines 9-35, examples). This product made by the process of Guiselin contains all of the layers with the properties claimed by applicants and therefore, the product is deemed to anticipate applicants' claimed product.

Alternatively, once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). Therefore, any difference imparted by the process of making the claimed product from the prior art is prima facie obvious absent evidence establishing an unobvious difference between the claimed product and the prior art product.

***Allowable Subject Matter***

Claims 4-7 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base

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claim and any intervening claims. Although the prior art (USP 5,304,394 and GB 2199848) discloses deposition of silicon oxide layers containing carbon by pyrolysis as underlayers on glass substrates for alkali barriers under infrared reflecting or electrically conducting oxide layers, there is no motivation to provide these layers as either the interlayer or the first dielectric layer in Guiselin and then directly deposit the reflecting metal layer thereon. The refractive index of the carbon containing layers is outside the range required by Guiselin and there is no suggestion to that these layers would be operable as the first dielectric layer in Guiselin, especially since placing them above the required interlayer of Guiselin would defeat the disclosed purpose of the carbon containing layer as an alkali barrier.

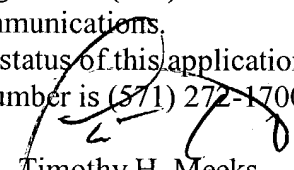
***Response to Arguments***

Applicant's arguments with respect to claims 1 and 3-36 set forth in the 2/12/04 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy H. Meeks whose telephone number is 571-272-1423. The examiner can normally be reached on Mon., Tues., Thurs.(6-6:30), Fri.(6:30-10:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on 571-272-1415. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

  
Timothy H. Meeks  
Primary Examiner  
Art Unit 1762

April 13, 2004